

STATE
OCCUPATIONAL HEALTH
AND SAFETY STANDARD --
INDOOR AIR QUALITY
WITH PROVISIONS ON INDOOR SMOKING
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OCCUPATIONAL SAFETY AND HEALTH STANDARD --
INDOOR AIR QUALITY

Section 1. APPLICABILITY.

A. The rules in this standard apply to the protection of employee safety and health in the following locations:

- (1) Offices, except for offices which are directly related to locations specified in subrule (B) of this section and which are directly involved in production or industrial processes.
- (2) Education facilities.
- (3) Health care facilities.
- (4) Buildings for public assembly.
- (5) Commercial establishments.

B. These rules do not apply to the following:

- (1) Agricultural operations.

- (2) Non-office, manufacturing and industrial work places.
- (3) Construction worksites.
- (4) Mobile work places.
- (5) Power plants.

Section 2. ADOPTION OF ASHRAE STANDARD BY REFERENCE.

A. The provisions of the American Society of Heating, Refrigeration, and Air-conditioning Engineers (ASHRAE) Standard 62-1989 entitled "Ventilation for Acceptable Indoor Air Quality," and subsequent revisions are adopted by reference in these rules only as they apply to workplaces covered by these rules.

B. Before any indoor workplace in a newly constructed or newly renovated building or portion of a building is occupied by any employees, the building shall be commissioned in accordance with ASHRAE GPC-1, "Guideline for Commissioning of HVAC Systems."

C. Copies of ASHRAE 62-1989 or ASHRAE GPC-1 may be obtained from ASHRAE, 1791 Tullie Circle, NE, Atlanta, Georgia 30329, or from the state as indicated in Section 10.

Section 3. COMPLIANCE.

A. Except as otherwise provided in this standard, acceptable indoor air quality may be achieved in either of the following ways:

1. The employer shall provide the specified quality and quantity of ventilation to occupied workplaces by use of the ventilation rate procedure (VRP) as delineated in Section 6.1 of ASHRAE 62-1989; or

2. The employer shall achieve acceptable air quality by controlling specific air contaminants, utilizing the indoor air quality procedure (IAQP) delineated in Section 6.2 of ASHRAE 62-1989. However, the IAQP may only be used when the proper operation and maintenance of the existing heating, ventilation, and air conditioning (HVAC) systems, can be documented.

B. Compliance with the requirements of this standard and ASHRAE 62-1989 shall be considered in the design, operation, and maintenance of facilities covered by this standard.

Section 4. PREVENTIVE MAINTENANCE PROGRAM.

A. An employer shall establish a preventative maintenance program that is designed to ensure the continued effective operation of each HVAC system, including the elimination and removal of contaminant sources within the HVAC system. HVAC systems shall be inspected at least once each year. In buildings served in whole or in part by a mechanical ventilation system, such inspections shall be conducted in a manner that identifies any necessary cleaning, repair or other maintenance required to be performed in order to ensure not only the optimal operation of the system but that the system is free of biological and other contaminations.

B. To facilitate operation, maintenance and inspection of HVAC systems, an employer shall designate a person to provide access to facilities and to provide information on all of the following:

- (1) Heating, ventilation, and air conditioning (HVAC) systems.
- (2) The periodic inspection and maintenance of HVAC systems.

- (3) Records and information which involve HVAC systems and which are required by the provisions of this standard.
- (4) The optimum operating parameters of each HVAC system.
- (5) The person or persons knowledgeable about the HVAC system operation.

Section 5. RECORDS AND INFORMATION.

A. All of the following records shall be maintained and available to the person who is designated pursuant to Section 4 of this standard:

- (1) A description of the HVAC systems, including the type and location of components.
- (2) HVAC system inspection reports.
- (3) Preventive maintenance actions, recommendations, and dates of actions and recommendations.

- (4) Records concerning HVAC system repairs, replacements, and modifications.
- (5) Air-cleaning or filtration equipment descriptions and the frequency of service.
- (6) Records concerning the training programs required by Section 8.

B. All of the following information shall be maintained and be available to the person designated pursuant to Section 4, and to the state inspection personnel:

- (1) HVAC system plans, drawings, specifications, catalog cuts, and owners manuals.
- (2) HVAC system control descriptions and diagrams.
- (3) HVAC system airflow measurement data and balancing reports.
- (4) Indoor air quality measurements.

C. Records and information listed in this standard shall be maintained in accordance with the following provisions:

- (1) Any record that deals with the description, specification, modification, or control of an HVAC system or component shall be maintained as long as system or component is installed in a workplace of which these rules apply.
- (2) Any record or information that could be used to determine or estimate an employee's exposure to an air contaminant shall be maintained in accordance with the provisions of this standard.
- (3) Any record or information relative to the maintenance, repair, or cleaning of an HVAC system or component shall be maintained for a period of not less than 5 years.

Section 6. REMODELING, RENOVATION, OR CONSTRUCTION.

A. An employer shall take appropriate actions to maintain acceptable indoor air quality during periods while work is being performed on the facility, such as construction, renovation, remodeling, reroofing, painting, and similar activities.

B. Employers shall meet with a contractor representative before the start of the contractor's work to establish and agree upon work plan that is designed to preserve indoor air quality during contractor operations.

C. When feasible, an employer shall notify employees, not less than 24 hours before work is performed, of the work to be performed and the anticipated adverse impact it may have on indoor air quality and other workplace conditions.

D. In determining the work plan, the employer and contractor shall consider the following, as may be applicable:

- (1) The requirements of this standard.
- (2) Material safety data sheets for contractor's hazardous materials.
- (3) The supplementation and curtailment of workplace ventilation.
- (4) Employer and contractor work schedules.

- (5) Isolation of work areas and negative-pressure containment.
- (6) Dust suppression.
- (7) The use of low-hazard materials where possible.
- (8) Contaminant entry into HVAC inlets.
- (9) Work practices to minimize contaminant generation.
- (10) Other appropriate industrial hygiene practices.

Section 7. INDOOR SMOKING.

A. Indoor Smoking-- Moderate smoking may be allowed in indoor office environments covered by this standard, in a manner contemplated by ASHRAE 62-1989.

B. Designated Smoking Areas--If smoking is restricted to designated smoking areas, then--

1. Smoking shall be allowed only in clearly posted designated smoking areas, which may or may not be enclosed rooms;

2. Smoking areas shall operate at negative pressure with respect to adjoining indoor spaces;

3. The smoking areas shall be located in a manner such that nonsmokers will not be required to use the area to discharge job-related responsibilities; and

4. The smoking areas shall be adequately ventilated and the air shall be filtered in accordance with the applicable codes, standards, ordinances or statutes.

5. Definition of Negative Pressure--Negative pressure is a condition that exists when less air is supplied to a space than is exhausted, so the air pressure within that space is less than in surrounding areas.

Section 8. TRAINING.

A. The Employer shall establish and implement an indoor air quality training program. With this program, information and training shall be provided to assure that employees are made aware of the provisions of this standard and their rights thereunder, the importance of adequate ventilation and the impact that changes made in the indoor workplace could have on indoor air quality.

Section 9. PREEMPTION OF LOCAL REQUIREMENTS.

It is intended that this standard shall preempt local ordinances, codes or regulations that might otherwise address or regulate indoor air quality in the workplaces covered by this standard.

Section 10. AVAILABILITY.

A. Copies of this standard and the ASHRAE standard are available to employers and other interested persons from the state at:

B. Permission to reproduce these rules in full is granted.